UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,685	06/26/2003	Masayuki Kozawa	KAS-179	2887

7590 09/17/2004

MATTINGLY, STANGER & MALUR, P.C.
Suite 370
1800 Diagonal Road
Alexandria, VA 22314

EXAMINER	
MILLER, TAKISHA S	

ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/603,685	KOZAWA ET AL.	
	Examiner	Art Unit	
	Takisha Miller	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 06262003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 18, reference character "19" has been used to designate both cover and screw. Appropriate correction is required.

Claim Objections

2. Claim 2 is objected to because of the following informalities: Claim 2 recites the limitation "the connector-terminal penetrating portion" in line 4. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

3. Claim 1 is objected to because of the following informalities: The limitations claimed in line 17 ("through the same") are unclear to the examiner. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi et al. (5,186,044)(hereinafter Igarashi) in view of Yamada (JP09-038989A)(English Translation-Detailed Description).

a. With respect to claims 1,3 and 10-13, Igarashi teaches a thermal type flow measuring instrument comprising a sensing element (6,7) for sensing an air flow (12), an

electronic circuit (5) electrically connected to said sensing element (6,7), and a frame- or box-shaped plastic casing component (1) for accommodating and protecting said electronic circuit (5), said plastic casing component being a housing (1) given as an injection molded part formed by integral molding together with a connector terminal (8) which is extended from an inside to an outside of said plastic casing component (1) while penetrating therethrough for electrical connection of said electronic circuit (5) to an external device (Figs. 2,5), wherein said housing (1) has a fixing portion (1A) molded with a metal plate (18) inserted for attachment to a duct component (11) serving as a passage (4) through which a fluid (12) to be measured flows, said metal plate (18) being entirely or partially covered with a plastic (Col. 4, lines 31-34)(Fig.10). Igarashi fails to teach an opening or a slot allowing only the plastic to pass through. Yamada teaches an opening or slot (5/11) for allowing only a plastic (17) to pass through (Figs. 2-4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Igarashi to include an opening or slot as taught by Yamada to create a resin rich area crevice in order to raise the breakage reinforcement of a weld line in resin molded structures (see Yamada; ¶ 0005-0012).

b. With respect to claim 2, Igarashi teaches a thermal type flow measuring instrument wherein said fixing portion (1A) given as a flange formed by integral molding with said metal plate (18) inserted in the connector terminal (8) of said housing (1), and said metal plate (18) has an opening through which said connector terminal (8) penetrates (Fig.5).

c. With respect to claim 4, Igarashi teaches a thermal type flow measuring instrument comprising a metal plate (18) but lacks teaches wherein the metal plate has an opening or a slot acting to form a weld line of the plastics molded. Yamada teaches an opening or a slot (5/11) acting to form a weld line (7) of the plastics molded (Figs. 3,4)(¶ 0014). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Igarashi to include an opening or slot as taught by Yamada to create a resin rich area crevice in order to raise the breakage reinforcement of a weld line in resin molded structures (see Yamada; ¶ 0005-0012).

d. With respect to claim 9, Igarashi teaches a thermal type flow measuring instrument comprising a sensing element (6,7) for sensing an air flow (12), an electronic circuit (5) electrically connected to said sensing element (6,7), and a frame- or box-shaped plastic casing component (1) for accommodating and protecting said electronic circuit (5), said plastic casing component being a housing (1) given as an injection molded part formed by integral molding together with a connector terminal (8) which is extended from an inside to an outside of said plastic casing component (1) while penetrating therethrough for electrical connection of said electronic circuit (5) to an external device (Figs. 2,5). Igarashi lacks teaching a vent pipe and a gate. Yamada teaches a vent pipe and a gate (Fig.6). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Igarashi to include a vent pipe and gate in order to effectively perform the process of injection molding (see Yamada; Fig.6).

6. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi et al. (5,186,044) in view of Kondo et al. (5,756,893)(hereinafter Kondo).

a. With respect to claims 5-7, Igarashi teaches a thermal type flow measuring instrument comprising a sensing element (6,7) for sensing an air flow (12), an electronic circuit (5) electrically connected to said sensing element (6,7), and a frame- or box-shaped plastic casing component (1) for accommodating and protecting said electronic circuit (5), said plastic casing component being a housing (1) given as an injection molded part formed by integral molding together with a connector terminal (8) which is extended from an inside to an outside of said plastic casing component (1) while penetrating therethrough for electrical connection of said electronic circuit (5) to an external device (Figs. 2,5). Igarashi lacks explicitly teaching an inclined sub connector terminal branched from said connector terminal. Kondo teaches an inclined sub connector terminal (28e-j) branched from a connector terminal (28 a-c)(Fig.3). It would have been obvious to one of ordinary skill in the art to modify Igarashi to include a sub connector terminal as taught by Kondo in order to suppress external electromagnetic waves, with an easy construction, by letting them escape to ground (see Kondo; Col. 2, lines 43-51).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Igarashi et al. (5,186,044) in view of Kondo et al. (5,756,893) as applied to claim 5 above and further in view of Yamada (JP09-038989A)(English Translation-Detailed Description). Igarashi in view of Kondo teaches a thermal type flow measuring instrument wherein said housing (1) has a fixing portion (1A) molded with a metal plate (18) inserted for attachment to a duct component (11)

serving as a passage (4) through which a fluid (12) to be measured flows, said metal plate (18) being entirely or partially covered with a plastic (Col. 4, lines 31-34)(Fig.10). Igarashi in view of Kondo fails to teach an opening or a slot allowing only the plastic to pass through. Yamada teaches an opening or slot (5/11) for allowing only a plastic (17) to pass through (Figs. 2-4). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Igarashi in view of Kondo to include an opening or slot as taught by Yamada to create a resin rich area crevice in order to raise the breakage reinforcement of a weld line in resin molded structures (see Yamada; ¶ 0005-0012).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Takisha Miller whose telephone number is (571) 272-2184. The examiner can normally be reached on Monday - Friday (7:00 am - 3:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800